

## ABSTRACT

Selection of clones having the kinase and/or phosphatase-like structure from clones which had been isolated and the structures thereof had been determined in the Helix Research Institute (helix clones; Japanese Patent Application No. 2000-183767) was conducted. Two novel genes were provided by carrying out homology search for all the helix clones by using the amino acid sequences of known kinases and phosphatases as queries. The genes are expected to be involved in intracellular signal transduction. The physiological functions of the inventive genes can be tested by using reporter gene assay systems capable of detecting signal transduction. The proteins of the present invention are useful as target molecules in drug discovery and in the development of new pharmaceuticals.

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